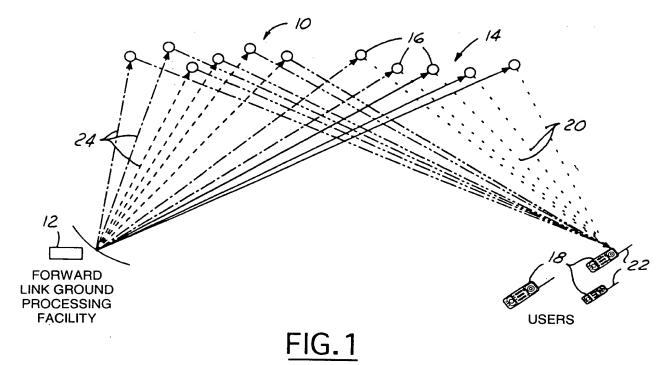


Substitute Drawing Sheet Fig's 1 and 2 Sheet 1 of 5

Serial No. 09/576,652 - Filed May 22, 2000

Frank A. Hagen, et al.

For: MULTI-NODE POINT-TO-POINT SATELLITE COMMUNICATION SYSTEM EMPLOYING MULTIPLE GEO SATELLITES



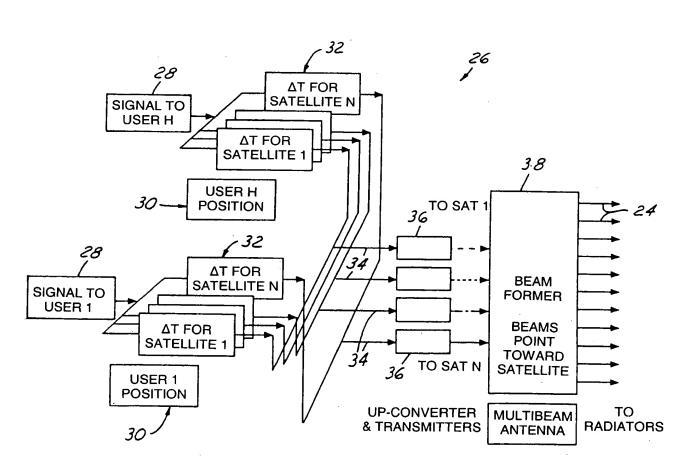


FIG. 2



Drawing Sheet Fig's 3 and 4 Sheet 2 of 5 Serial No. 09/576,652 – Filed May 22, 2000

Frank A. Hagen, et al.

For: MULTI-NODE POINT-TO-POINT SATELLITE COMMUNICATION SYSTEM EMPLOYING MULTIPLE GEO SATELLITES

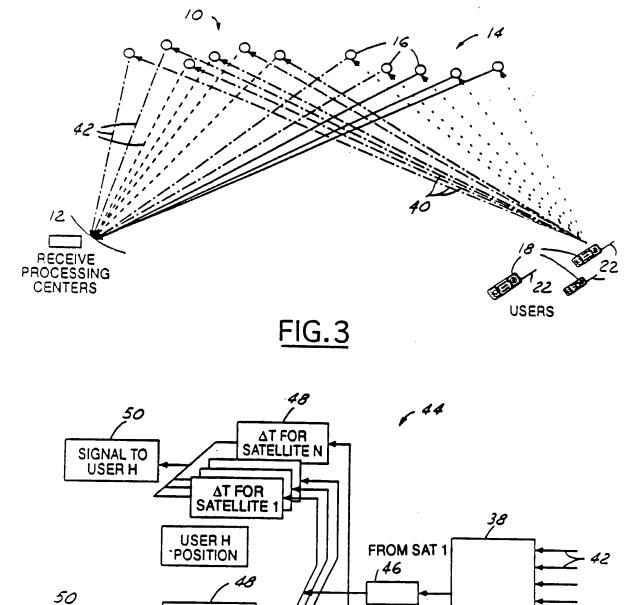


FIG.4

BEAM

FORMER

BEAMS

POINT TOWARD

SATELLITE

MULTIBEAM

ANTENNA

FROM

RADIATORS

FROM SAT. N

RECEIVERS &

DOWN-CONVERTERS

AT FOR

SATELLITE N

ΔT FOR SATELLITE 1

USER 1 POSITION

SIGNAL TO

USER 1



Drawing Sheet Fig. 5 Sheet 3 of 5 Serial No. 09/576,652 – Filed May 22, 2000 Frank A. Hagen, et al.

For: MULTI-NODE POINT-TO-POINT SATELLITE COMMUNICATION SYSTEM EMPLOYING MULTIPLE GEO SATELLITES

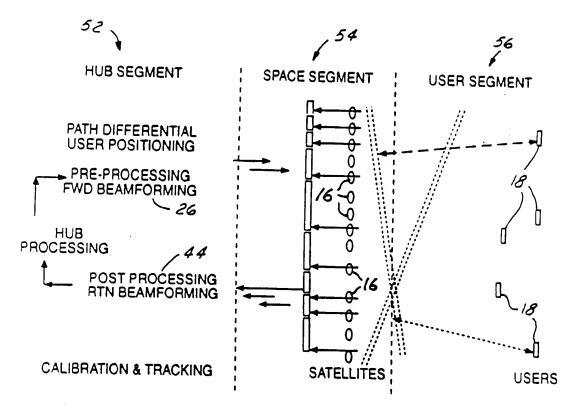
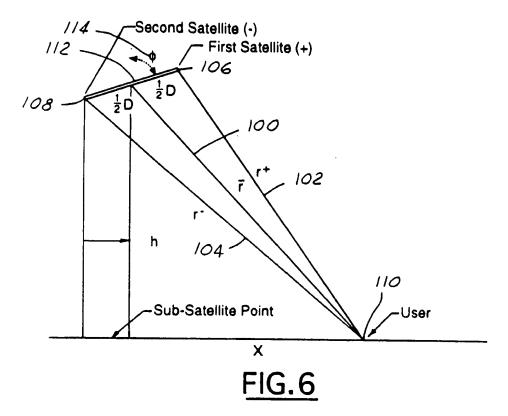


FIG.5



Sheet Fig's 6 and 7 Sheet 4 of 5 Serial No. 09/576,652 – Filed May 22, 2000 Frank A. Hagen, et al.

For: MULTI-NODE POINT-TO-POINT SATELLITE COMMUNICATION SYSTEM EMPLOYING MULTIPLE GEO SATELLITES



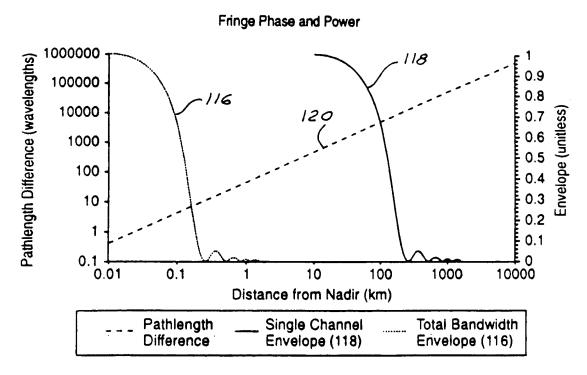


FIG.7



Drawing Sheet Fig's 8 and 9 Sheet 5 of 5 Serial No. 09/576,652 - Filed May 22, 2000 Frank A. Hagen, et al.

For: MULTI-NODE POINT-TO-POINT SATELLITE COMMUNICATION SYSTEM EMPLOYING MULTIPLE GEO SATELLITES

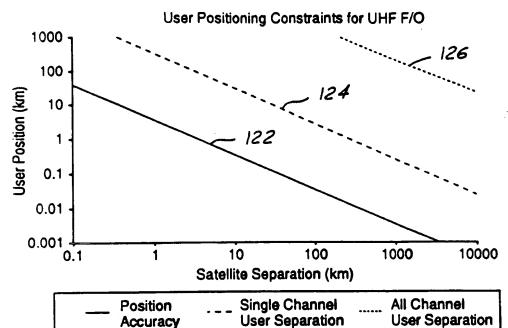
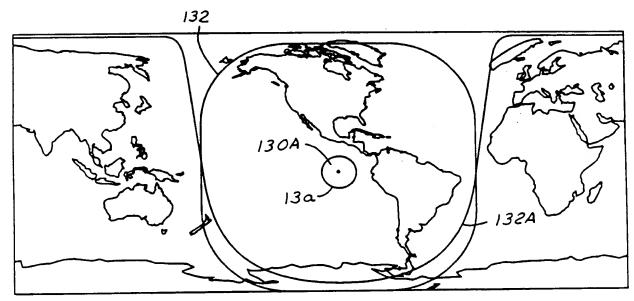


FIG.8

Accuracy



Sat0 Sat1 Orbital Parameters: **GEO GEO** Altitude: 110°W Longitude of Asending Node: 100°W 10° 0° Inclination (i): 0.087 = i/2**Eccentricity:** 90° Argument of Perigee

FIG.9